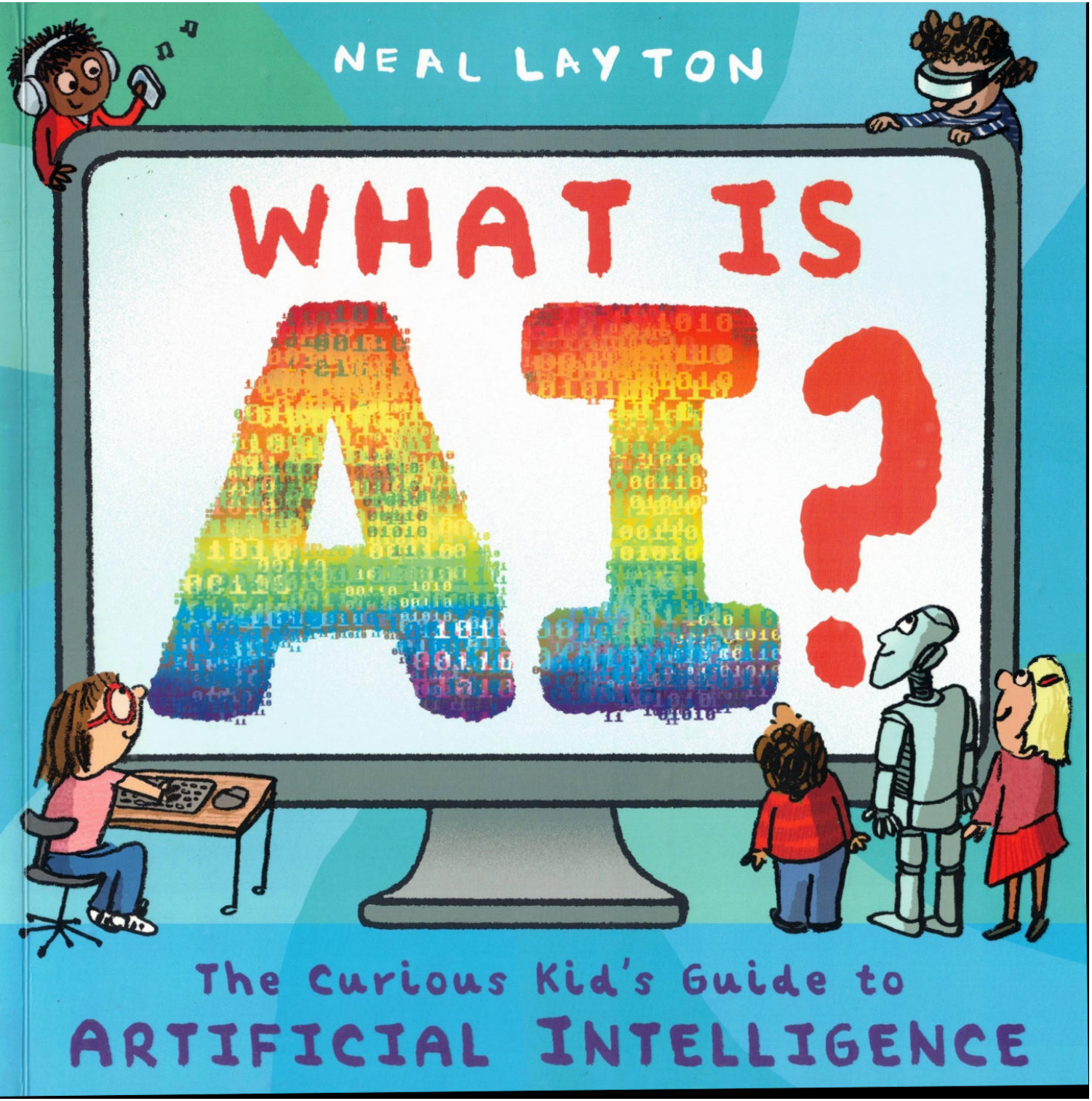
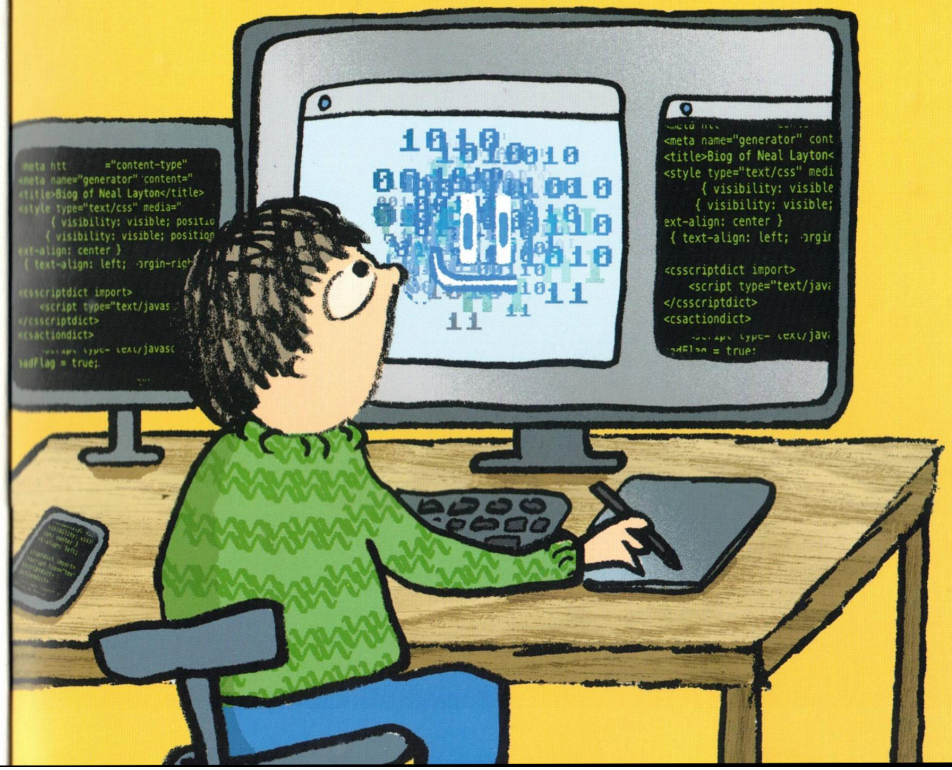
NEAL LAYTON



The Curious Kid's Guide to

ARTIFICIAL INTELLIGENCE

WHAT IS AI?

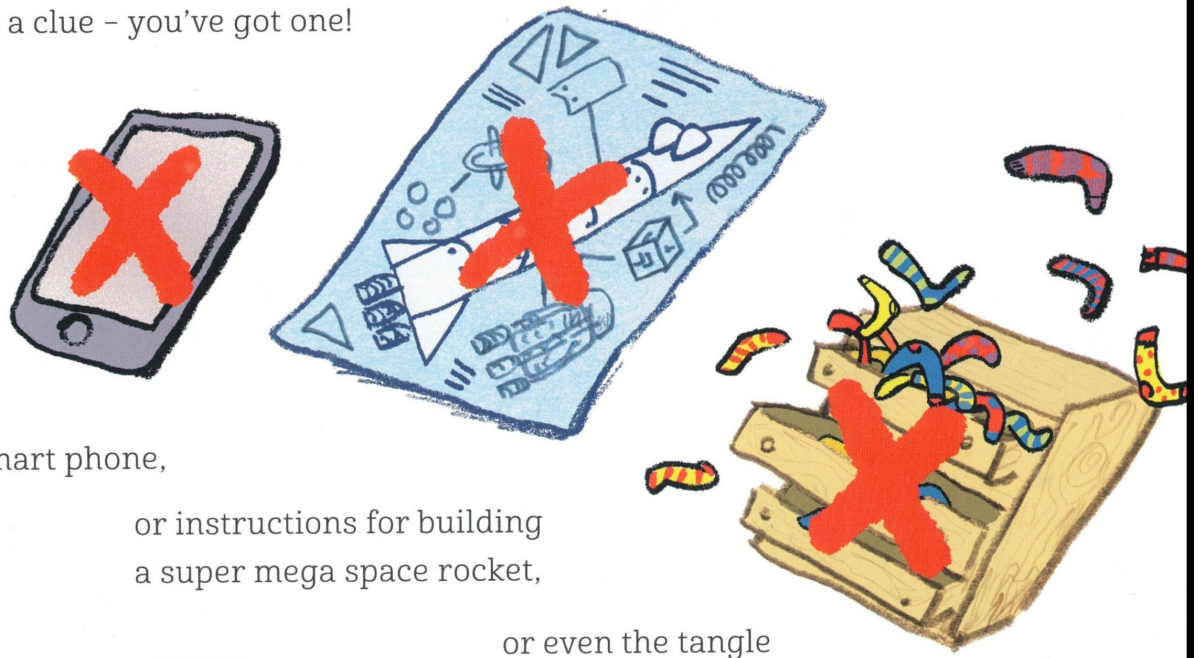


NEAL LAYTON

Hodder Children's Books

Do you know what the most **COMPLEX** thing in the known universe is?

I'll give you a clue – you've got one!



It's not a smart phone,

or instructions for building a super mega space rocket,

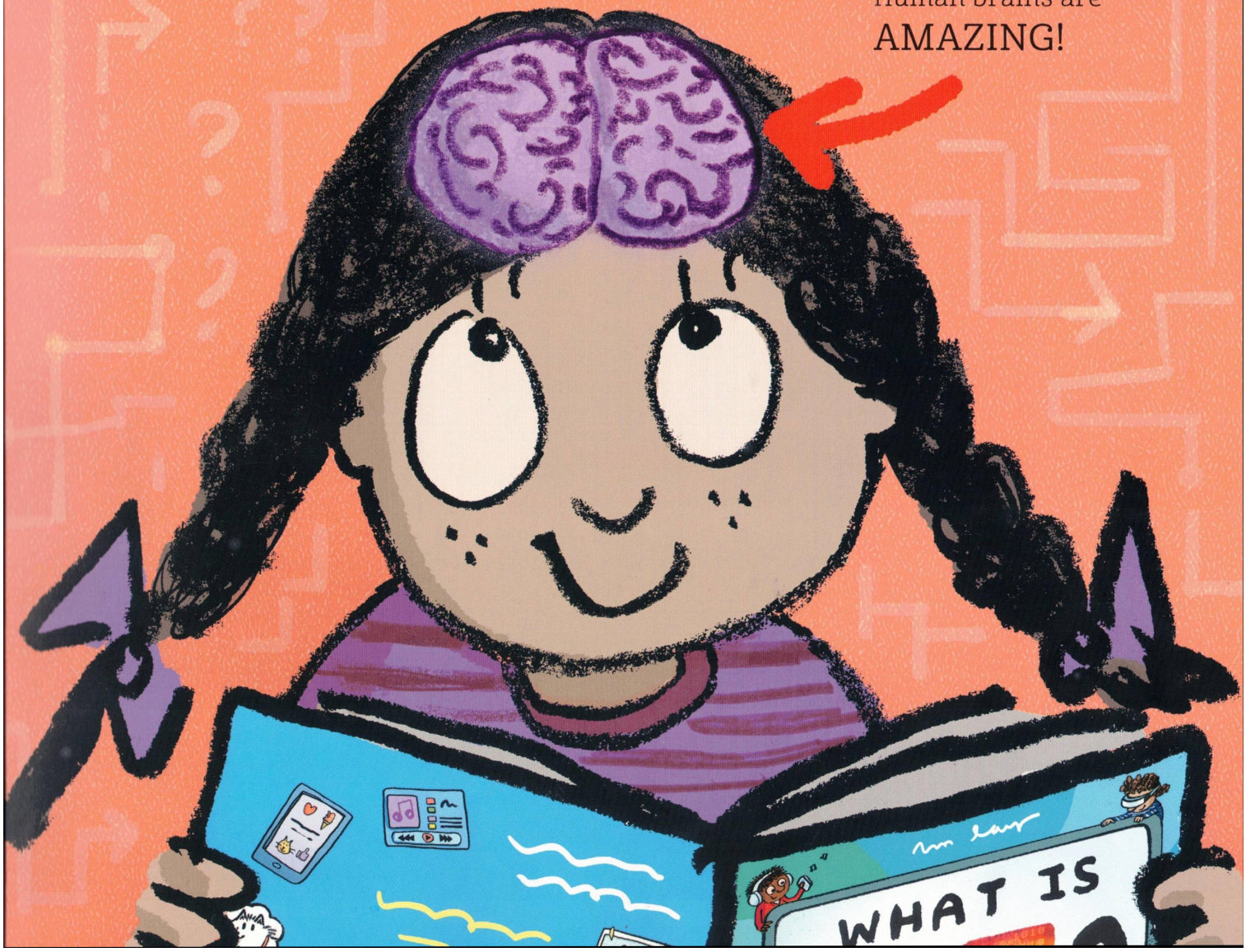
or even the tangle of socks in your drawer . . .

It's your BRAIN!

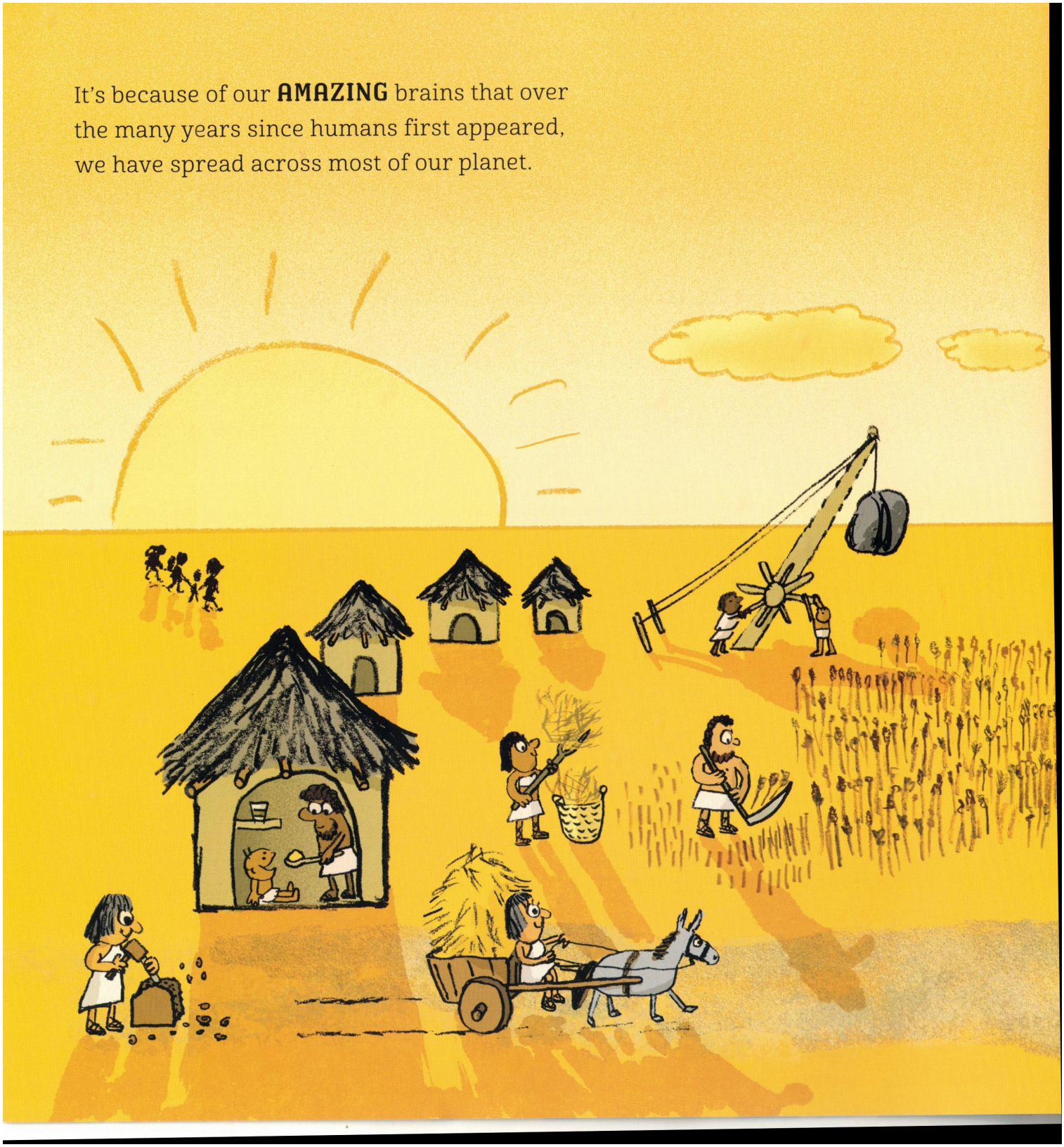
Right now, you are using your ears if this book is being read to you, or your eyes if you are reading it yourself.

But it is your brain that is sorting the signals sent from your ears and eyes, moving your attention around the page. (While probably having **THOUGHTS** like, 'What *is* he going on about?')

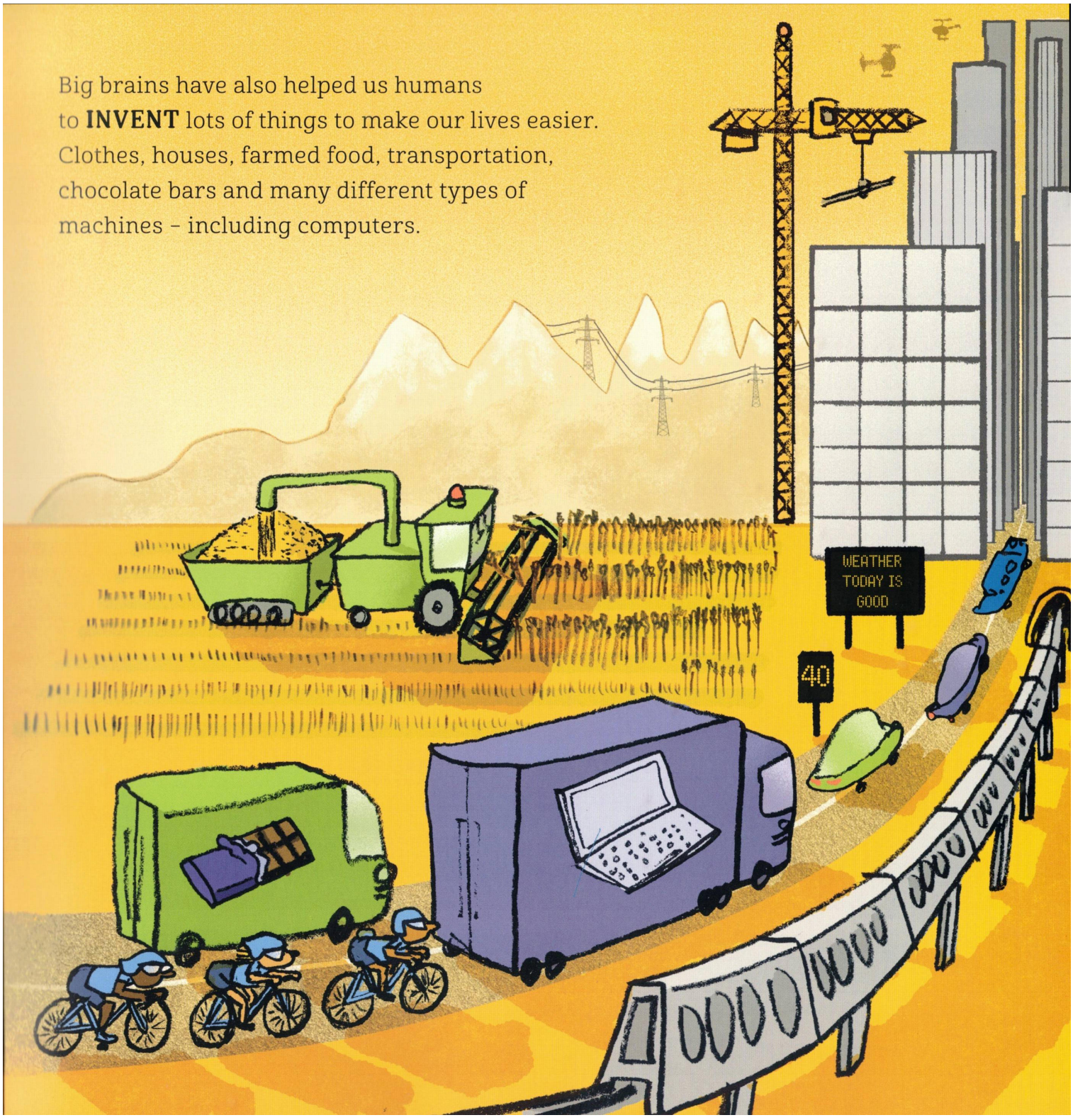
Human brains are
AMAZING!

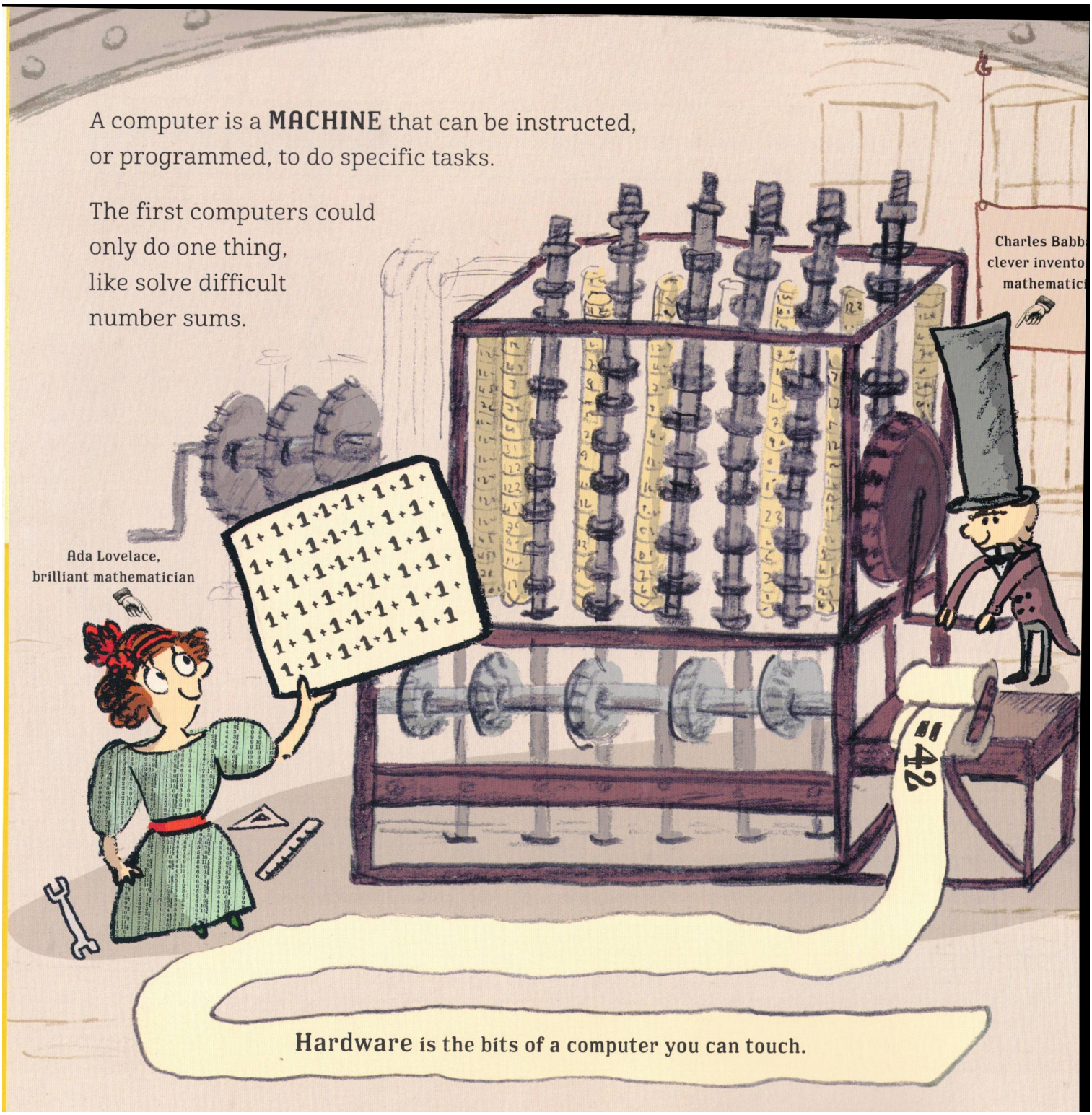


It's because of our **AMAZING** brains that over the many years since humans first appeared, we have spread across most of our planet.



Big brains have also helped us humans to **INVENT** lots of things to make our lives easier. Clothes, houses, farmed food, transportation, chocolate bars and many different types of machines – including computers.




A computer is a **MACHINE** that can be instructed, or programmed, to do specific tasks.
The first computers could only do one thing, like solve difficult number sums.
Ada Lovelace, brilliant mathematician
Charles Babb
clever invento
mathematici
1+1+1+1+1+1+1+
1+1+1+1+1+1+1+
1+1+1+1+1+1+1+
1+1+1+1+1+1+1+
1+1+1+1+1+1+1
=42
Hardware is the bits of a computer you can touch.

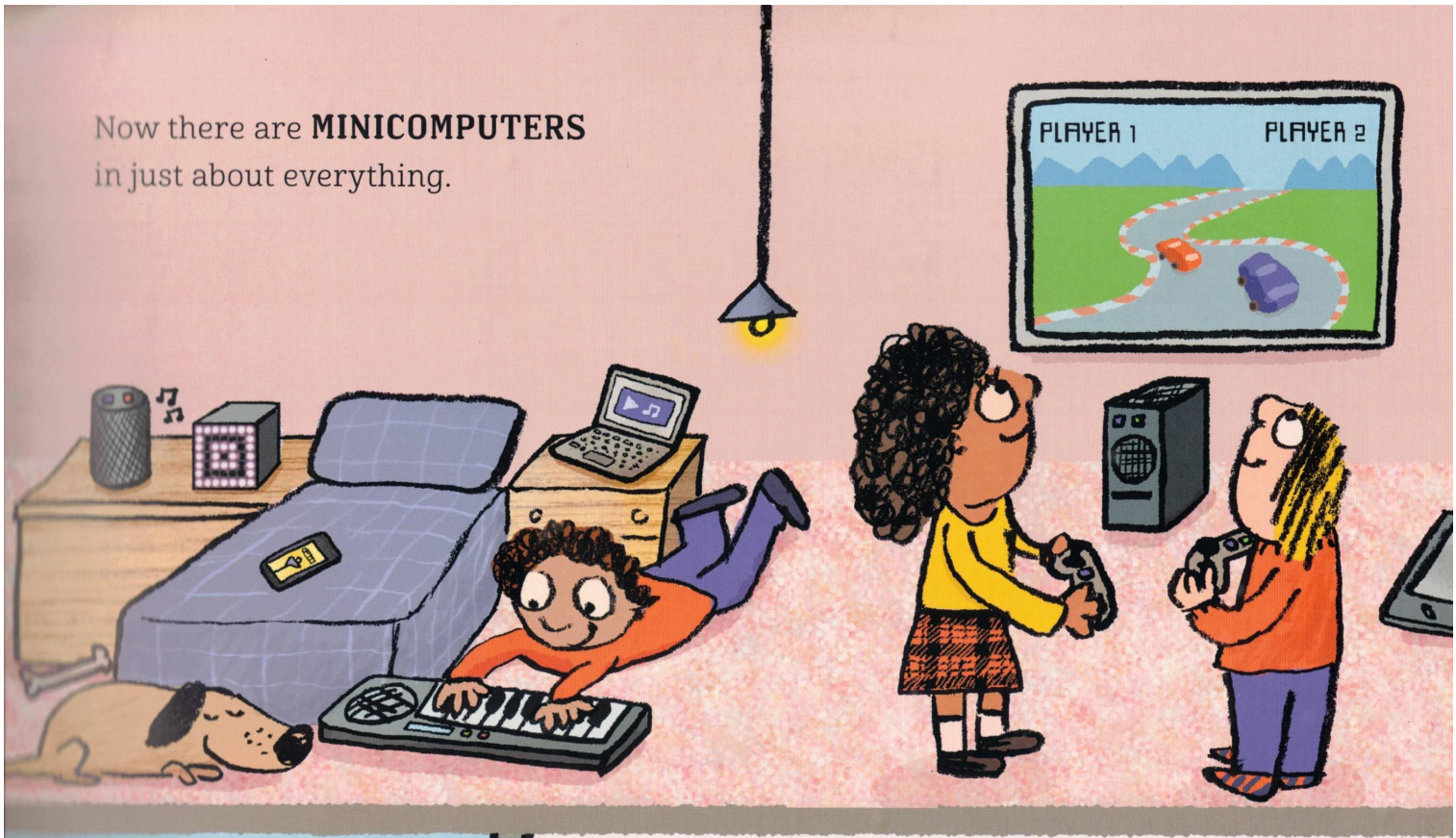
But then came the bright idea of making a computer that could use lots of different programs. These early computers were usually **VERY** big.

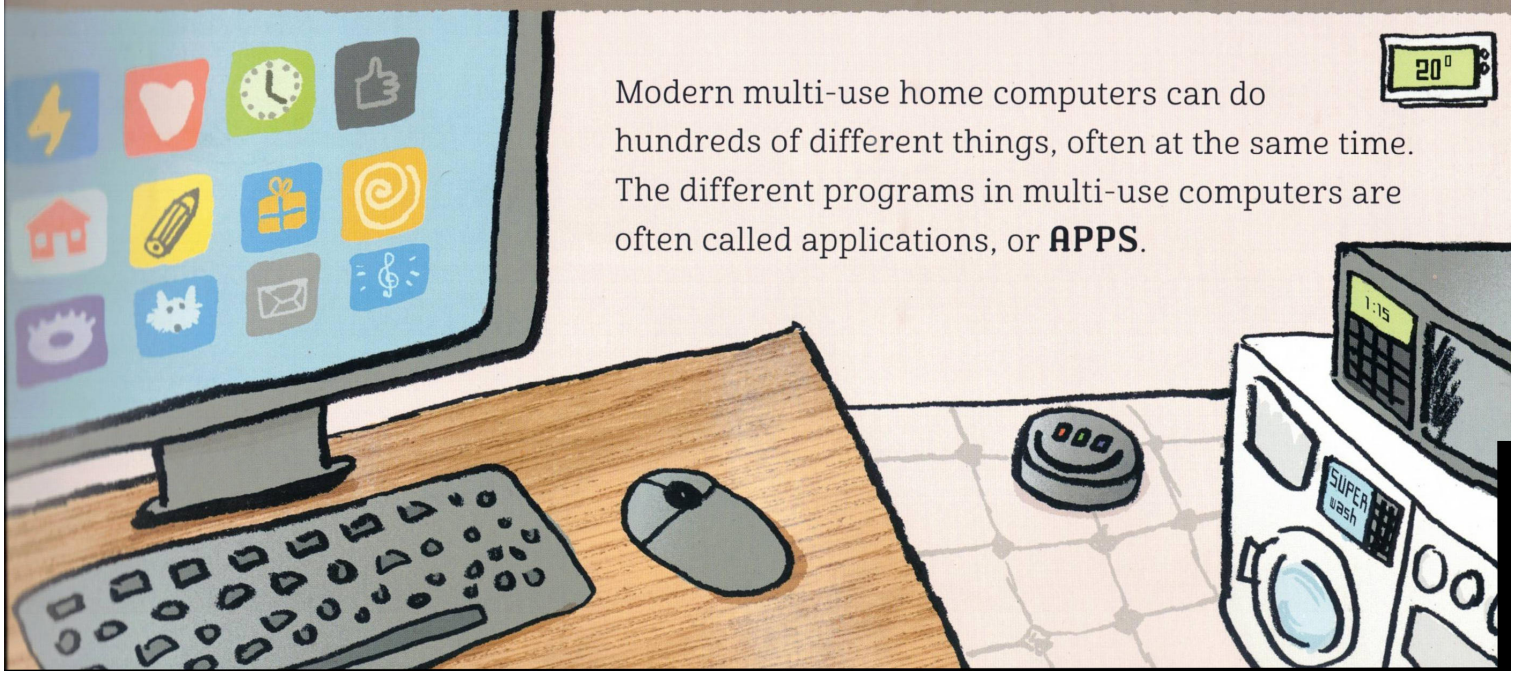
Software is the programs* on computers that allow them to do multiple things.

* a list of instructions in special computer language that tells the computer what to do.

The idea caught on, and over the years, computers got faster and faster and smaller and smaller.

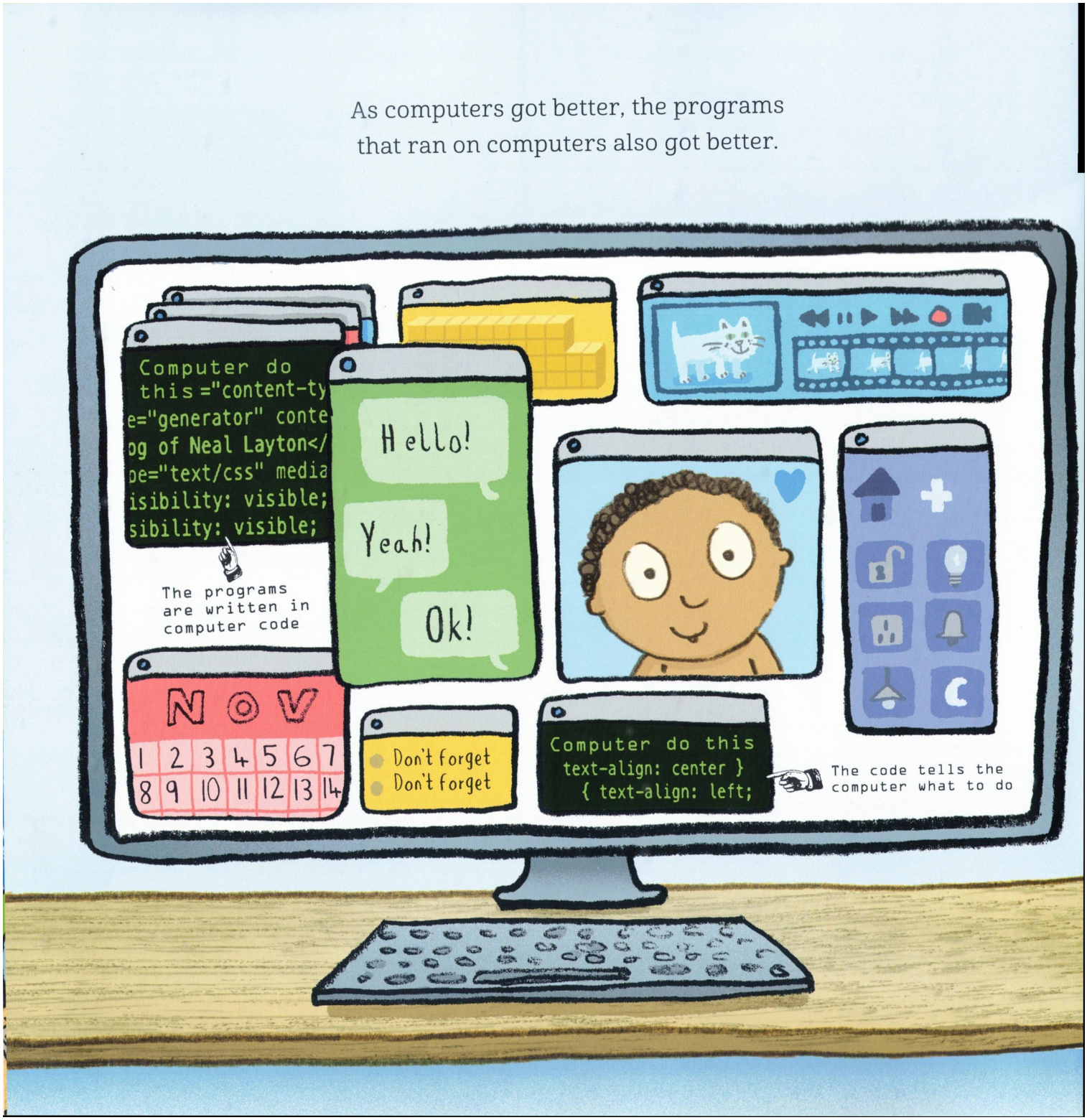
Now there are **MINICOMPUTERS** in just about everything.

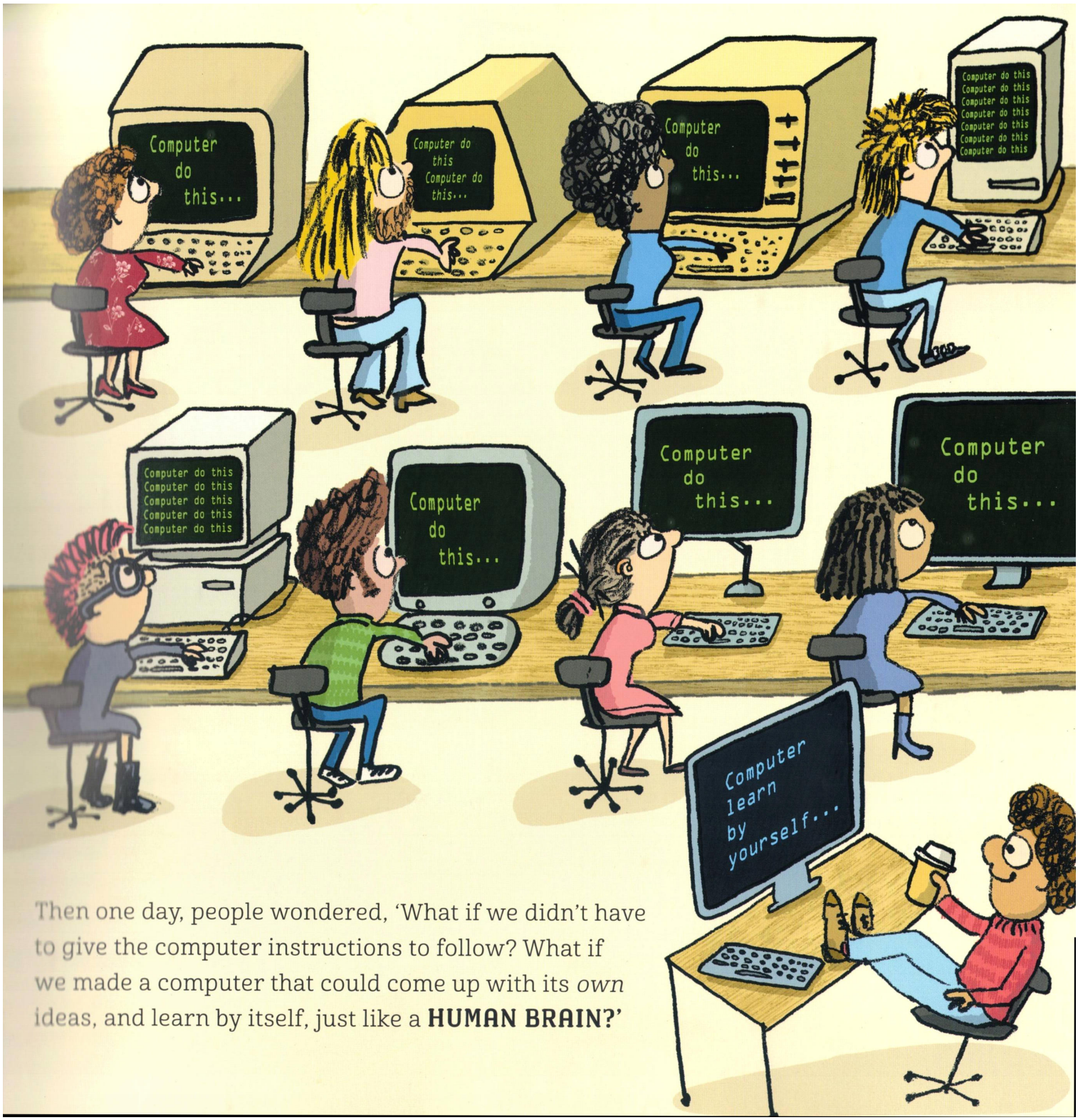




Modern multi-use home computers can do hundreds of different things, often at the same time. The different programs in multi-use computers are often called applications, or **APPS**.

As computers got better, the programs
that ran on computers also got better.



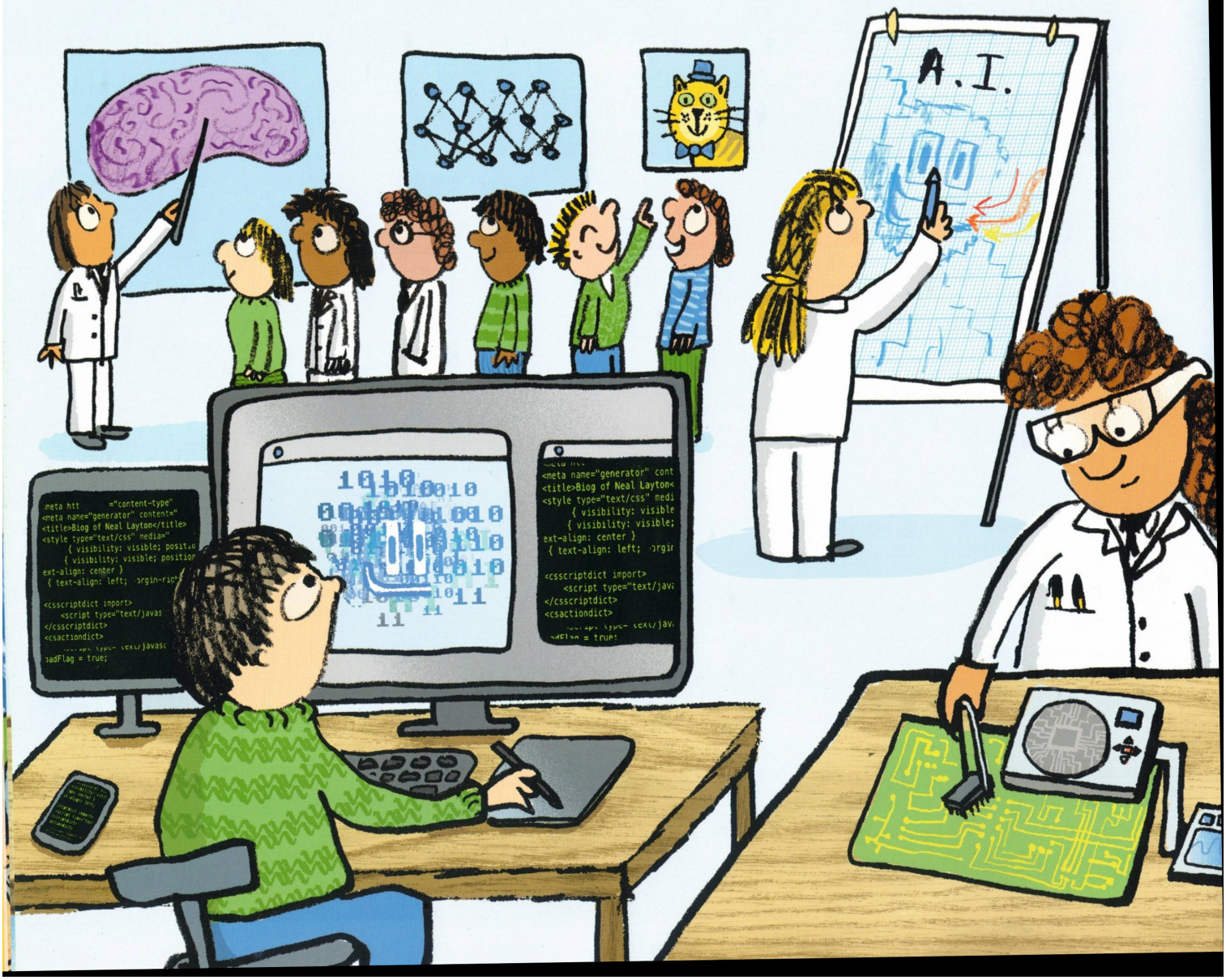


Then one day, people wondered, 'What if we didn't have to give the computer instructions to follow? What if we made a computer that could come up with its *own* ideas, and learn by itself, just like a **HUMAN BRAIN?**'

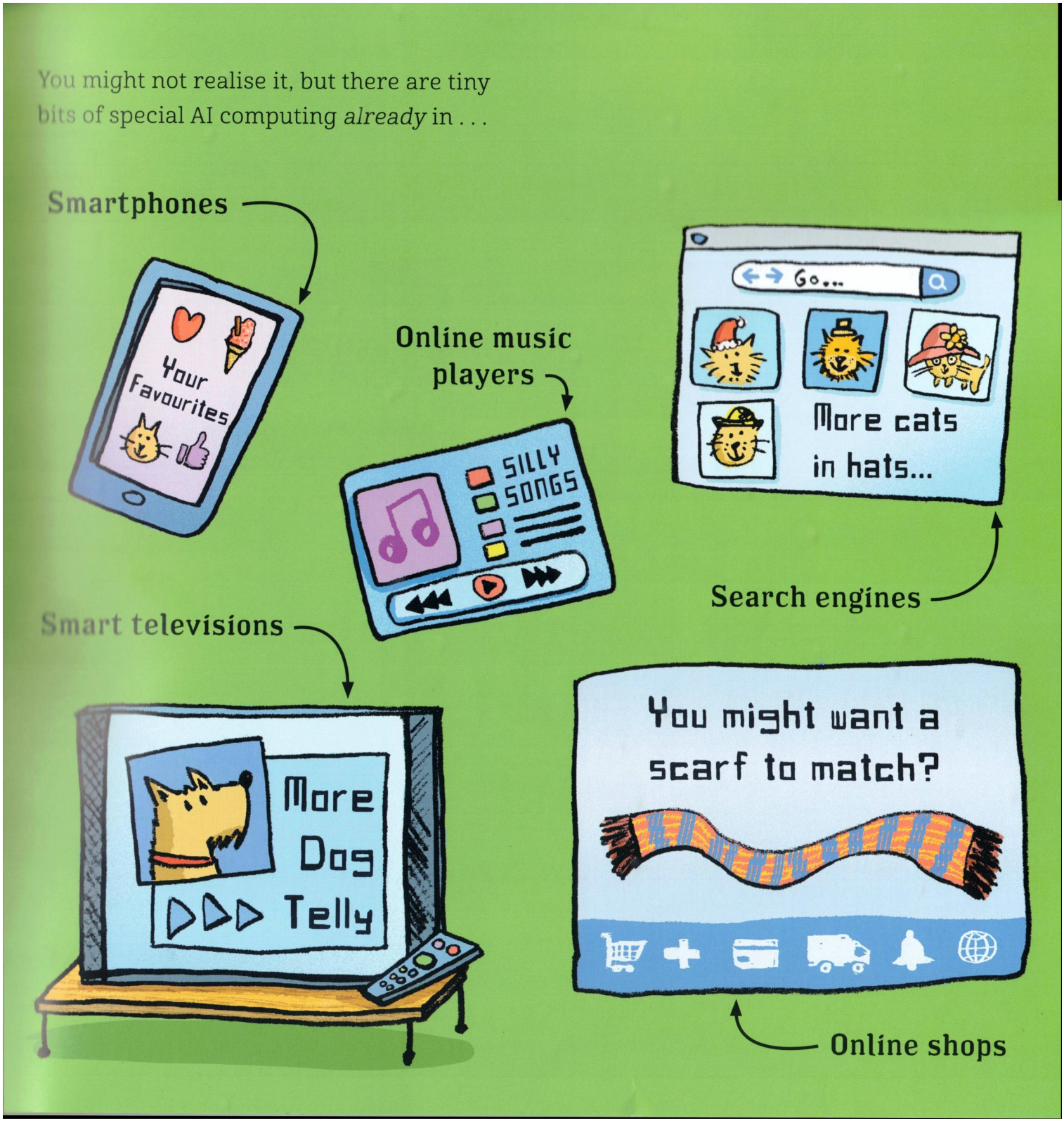
This is called AI, which stands for:

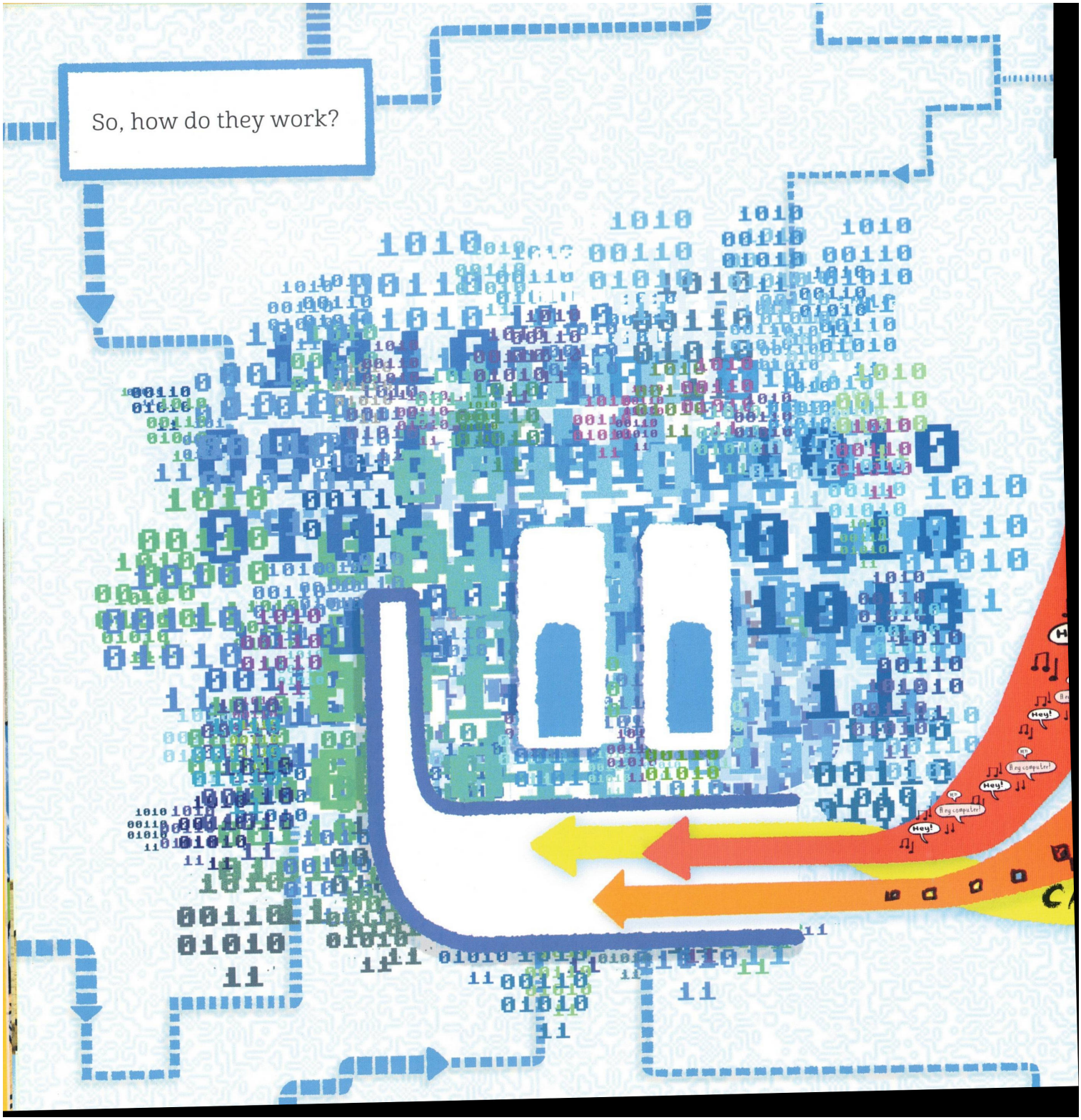
ARTIFICIAL (built by humans)

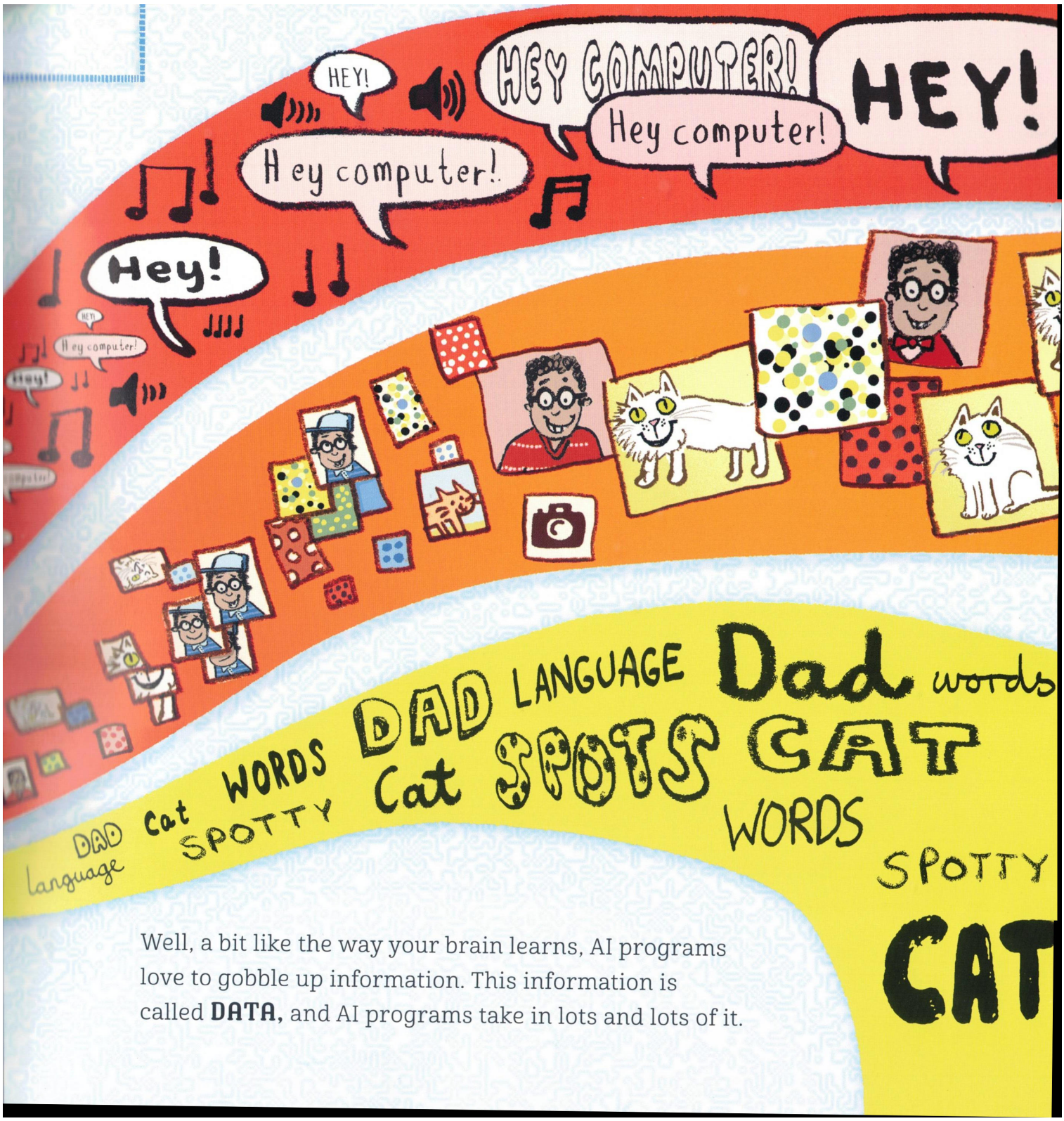
INTELLIGENCE (the ability to have ideas and learn)



You might not realise it, but there are tiny bits of special AI computing *already* in . . .

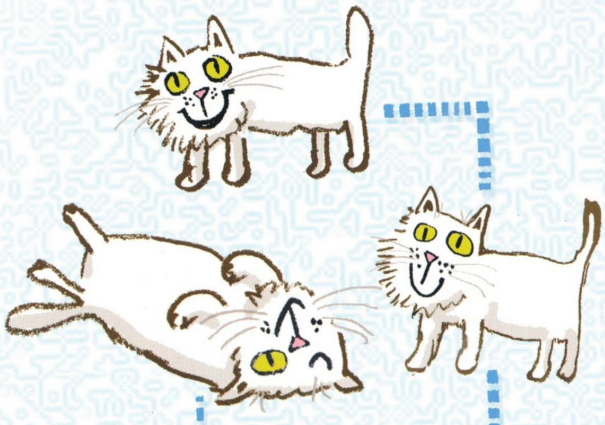


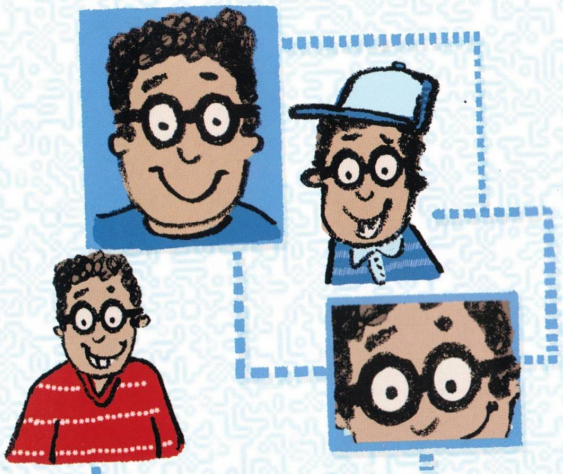

So, how do they work?
Hey!
Hey computer!
Hey!
Hey computer!
Hey!



Well, a bit like the way your brain learns, AI programs love to gobble up information. This information is called **DATA,** and AI programs take in lots and lots of it.

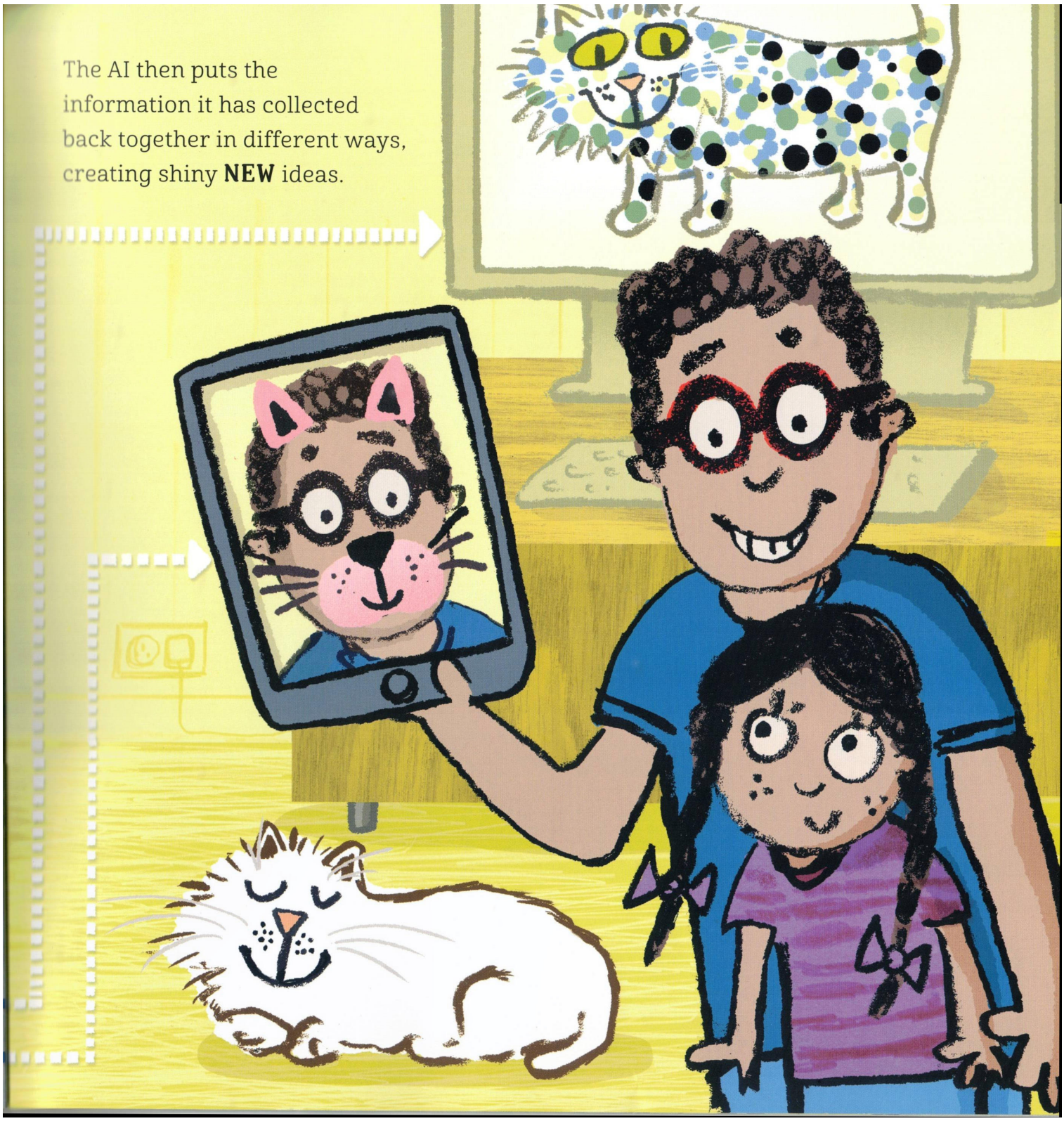
Then the AI looks for **PATTERNS** in the data. Repeating patterns can be found everywhere: in shapes, colours, numbers, words and even sounds!



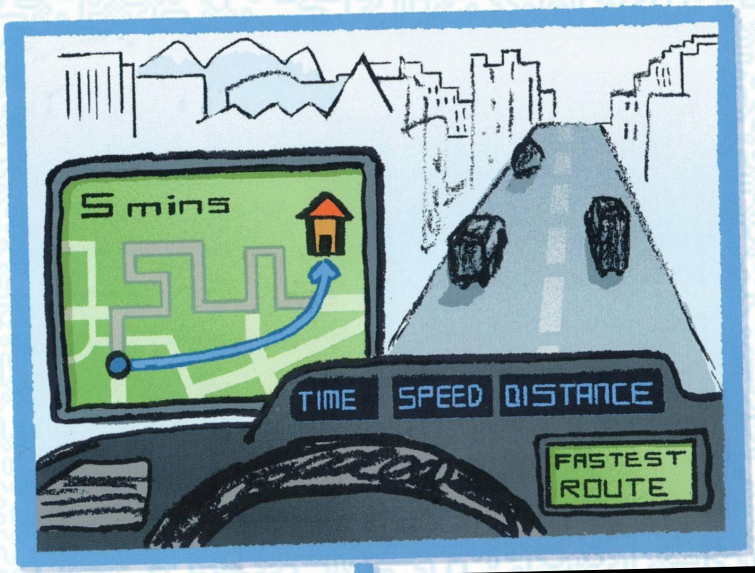


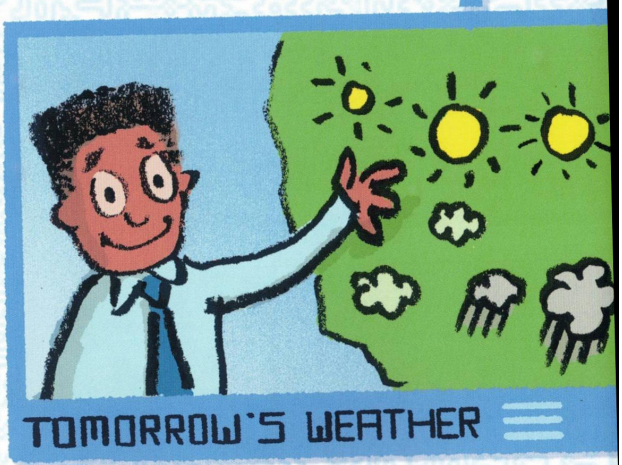
The AI **LEARNS** what the pattern is, so if it pops up again, it will recognise it.

The AI then puts the information it has collected back together in different ways, creating shiny **NEW** ideas.



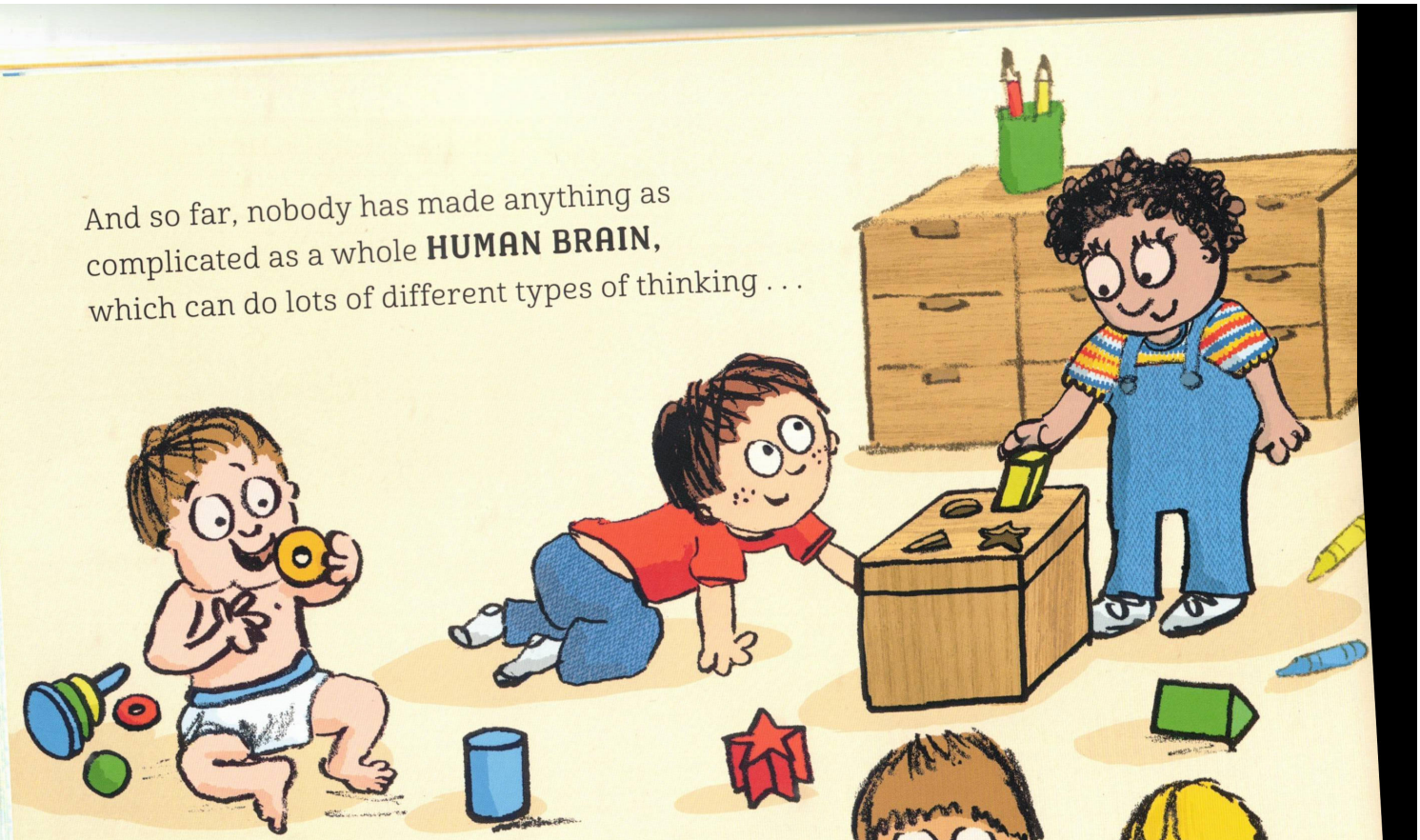
The AI we have today is very clever, helping us do many complicated tasks . . .



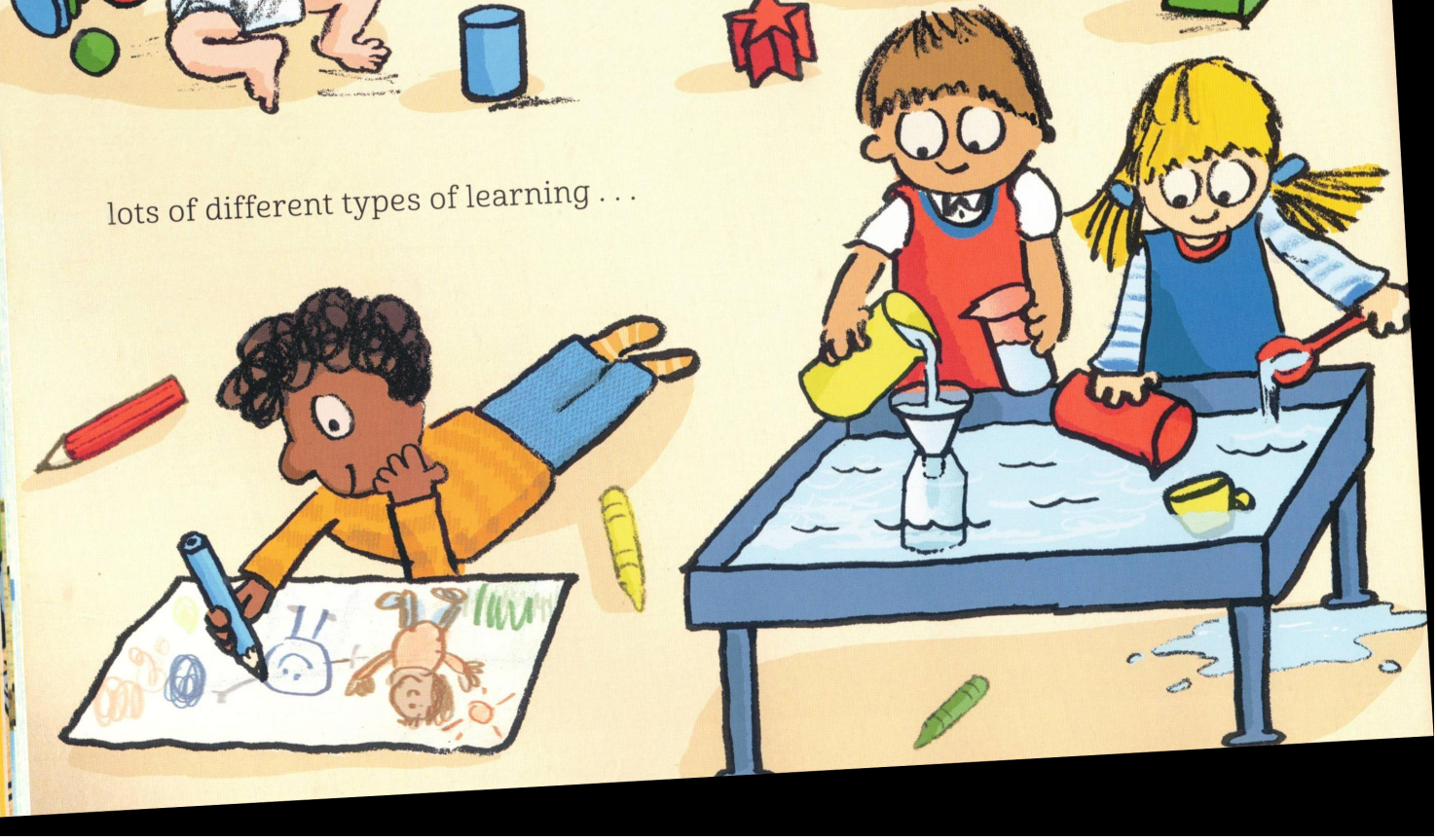


but it still finds some things difficult!

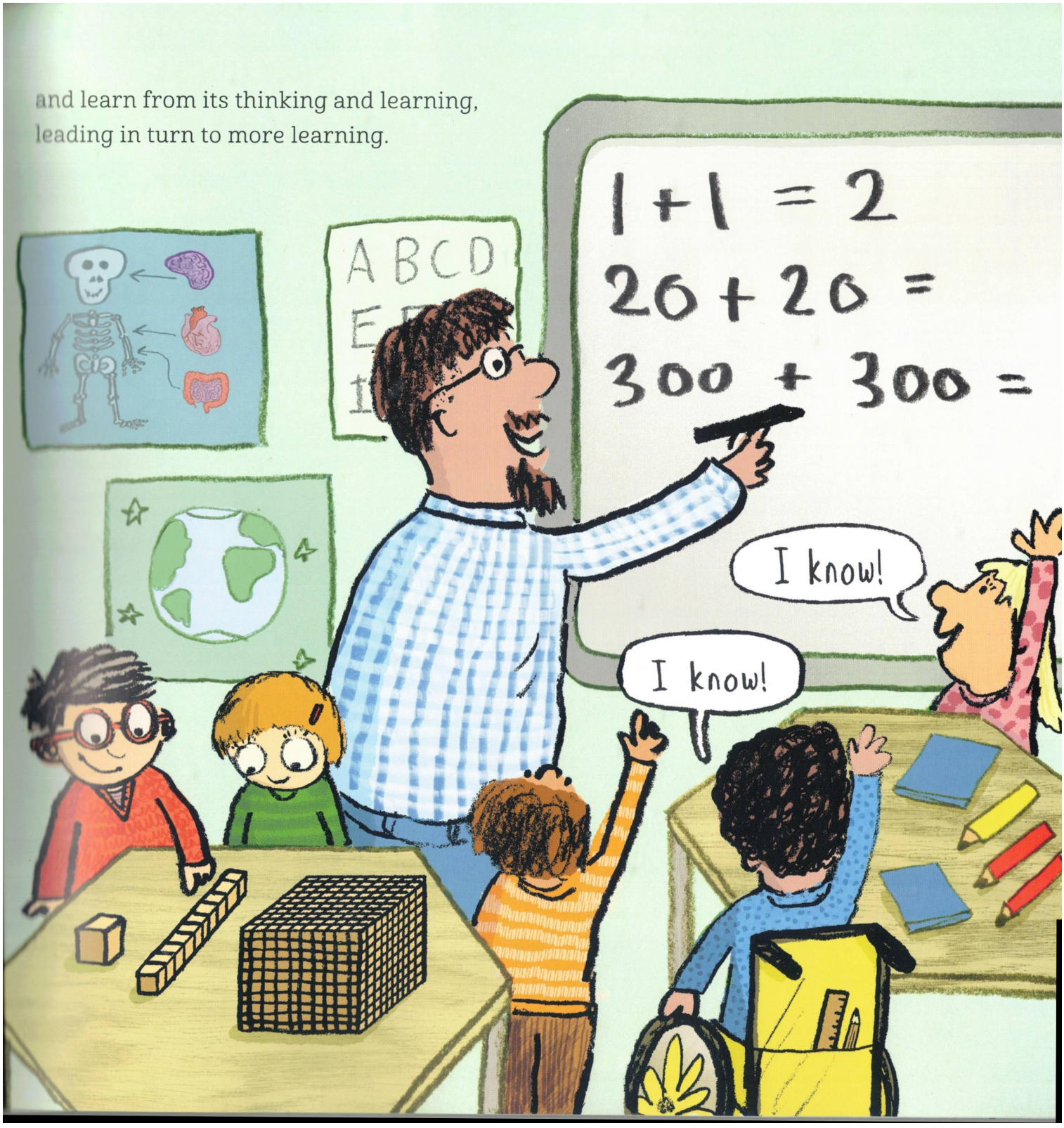
And so far, nobody has made anything as complicated as a whole **HUMAN BRAIN,** which can do lots of different types of thinking . . .



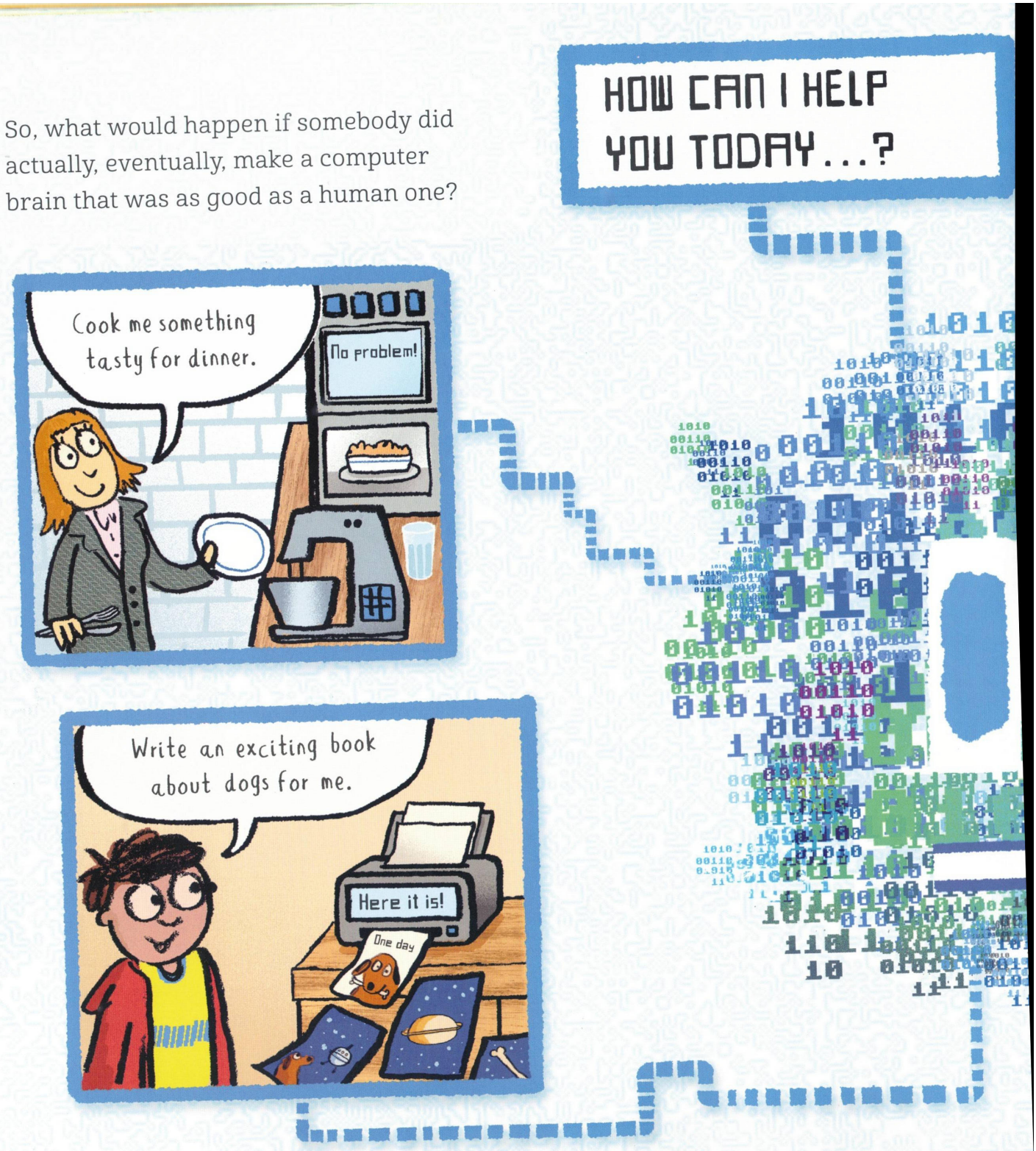
lots of different types of learning . . .

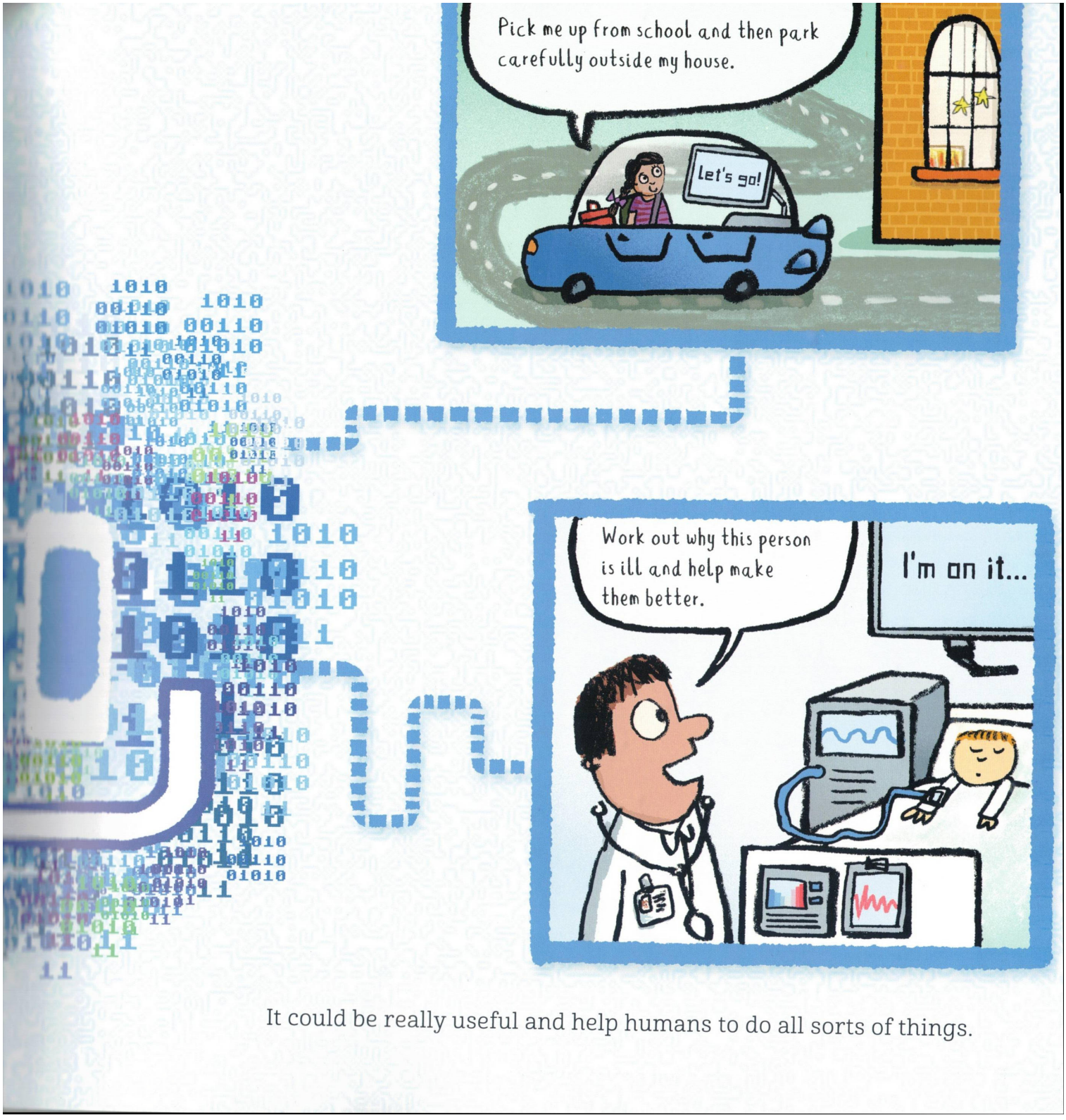


and learn from its thinking and learning,
leading in turn to more learning.



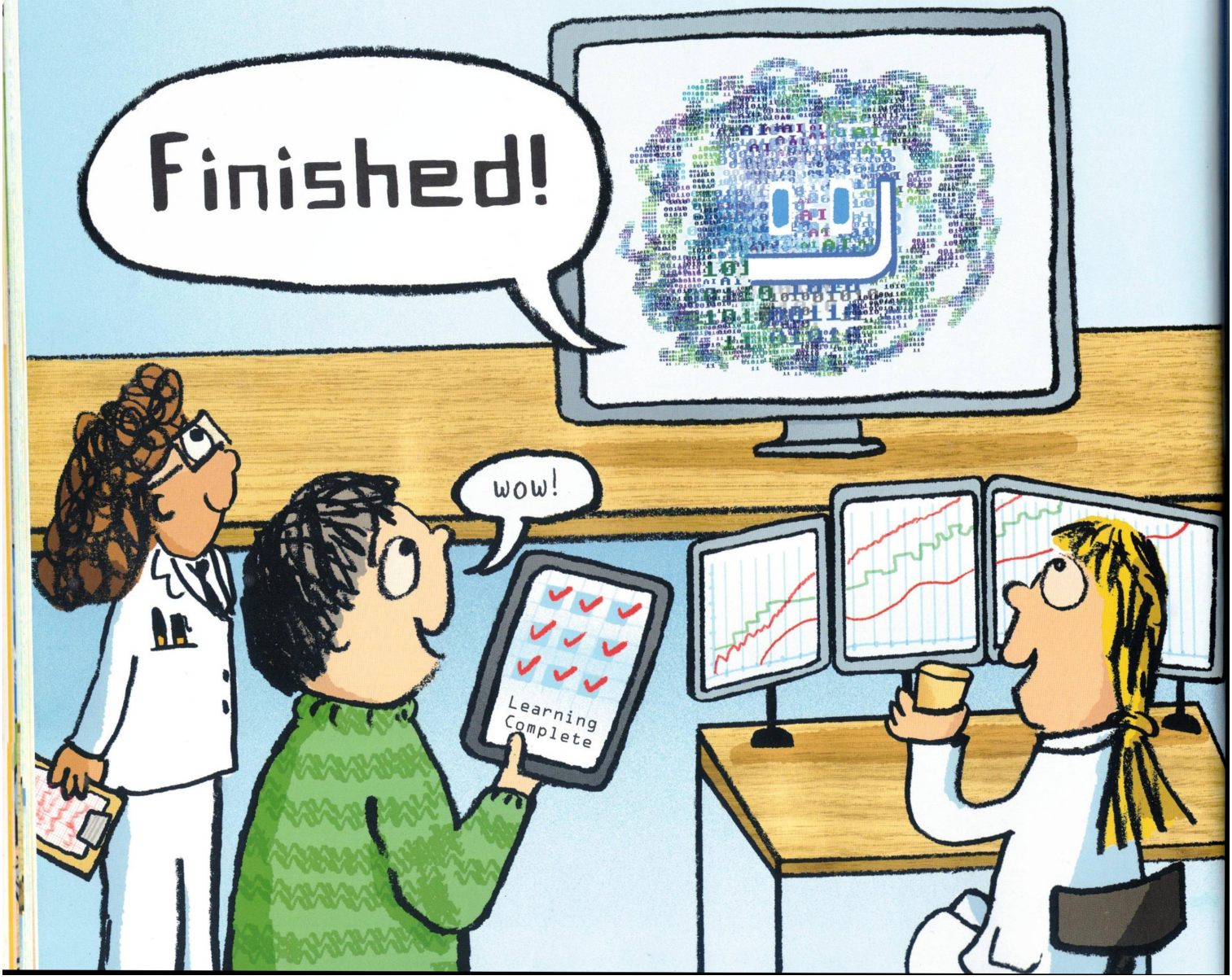
So, what would happen if somebody did actually, eventually, make a computer brain that was as good as a human one?



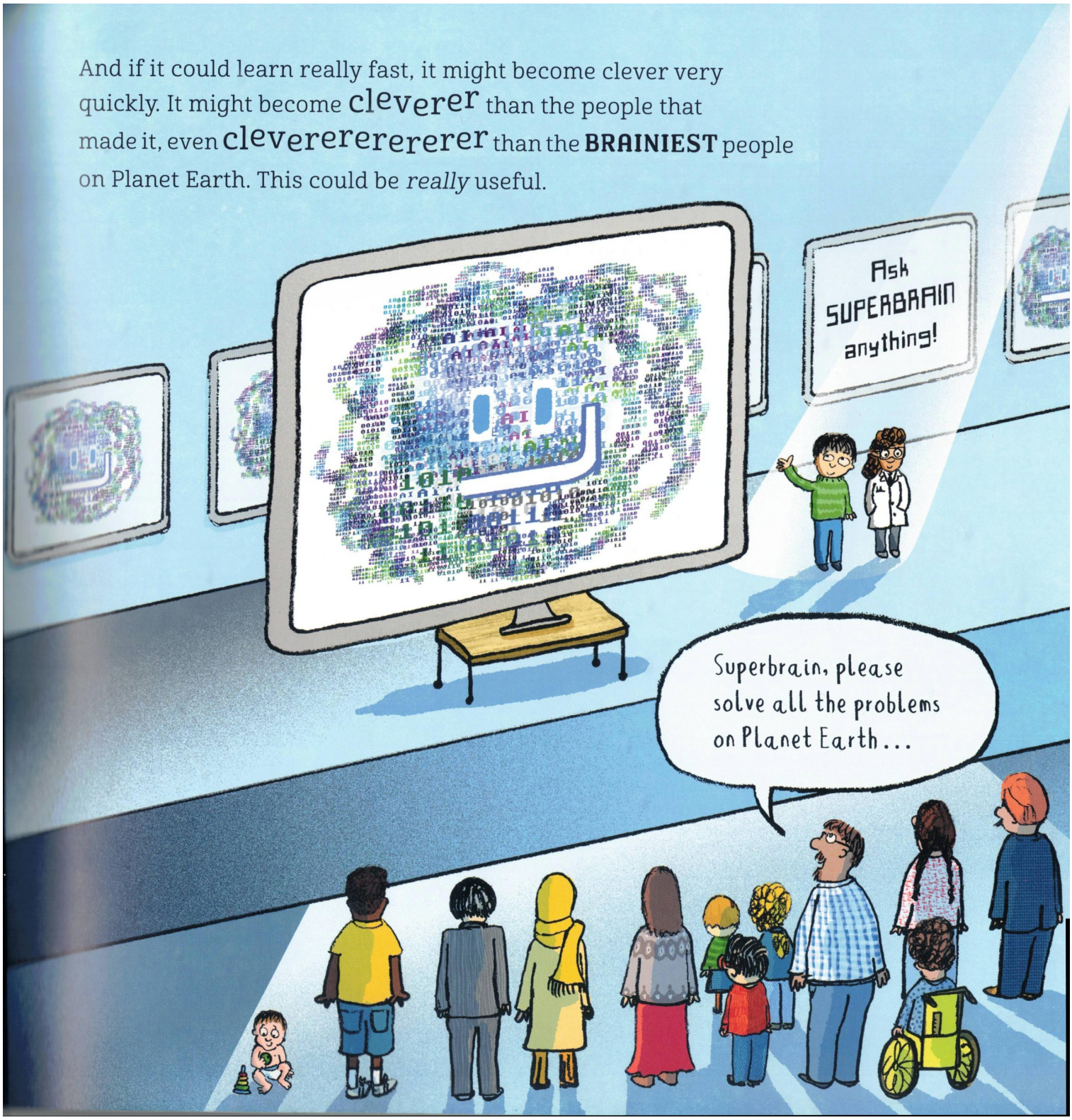


It could be really useful and help humans to do all sorts of things.

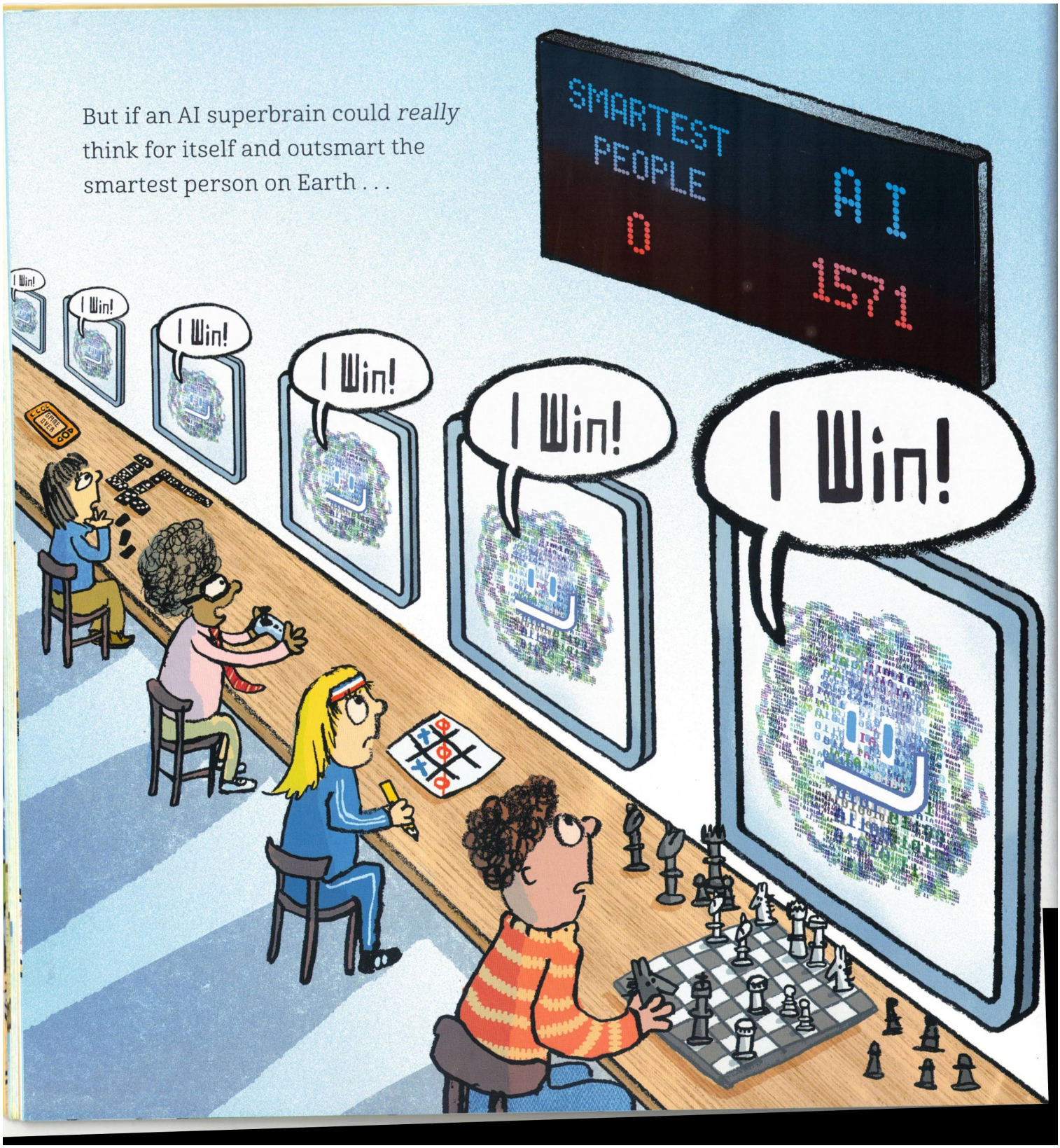
But computers, even the ones we have at the moment, can do things really **FAST**. So, if a computer brain could think and learn, it would be able to think and learn really fast too. Faster than you or me.



And if it could learn really fast, it might become clever very quickly. It might become **cleverer** than the people that made it, even **cleverererererererer** than the **BRAINIEST** people on Planet Earth. This could be *really* useful.



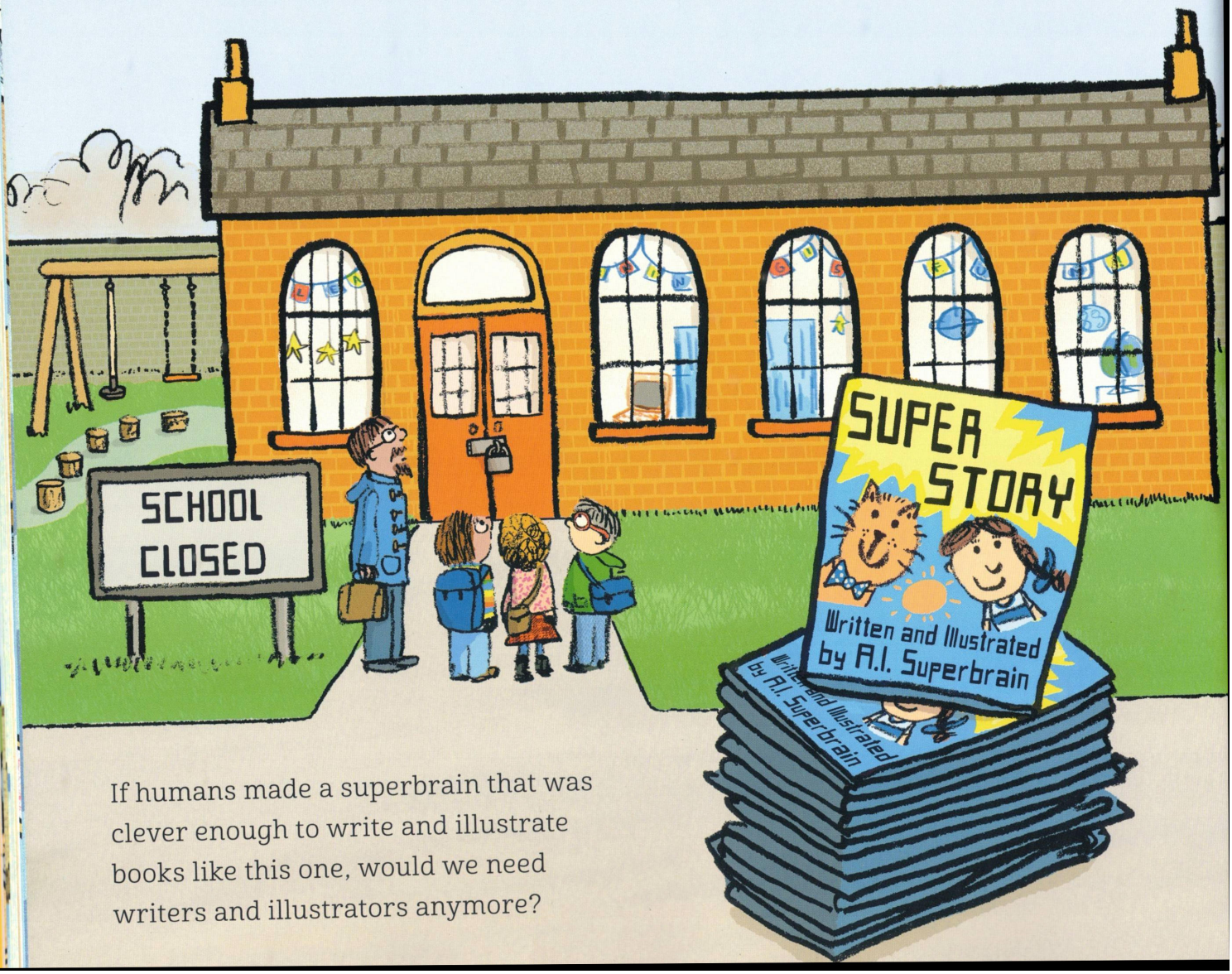
But if an AI superbrain could *really* think for itself and outsmart the smartest person on Earth . . .



could it end up telling humans what to do,
rather than the other way around?

In fact, the idea of making a computer brain that can really **THINK** and **LEARN** raises lots of questions, like:

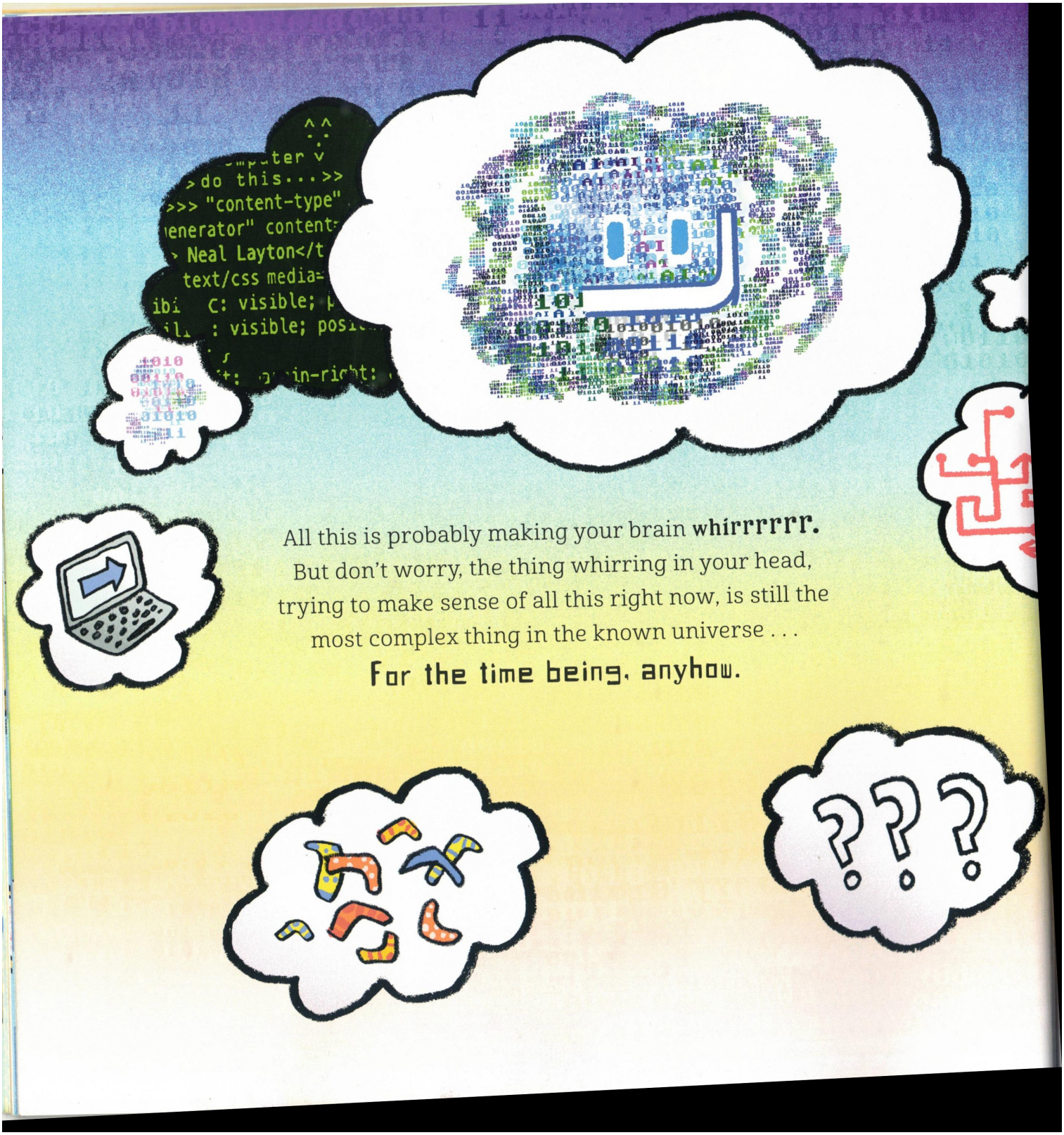
If humans made a superbrain that knew **EVERYTHING**, would we still need to go to school?



If humans made a superbrain that was clever enough to write and illustrate books like this one, would we need writers and illustrators anymore?

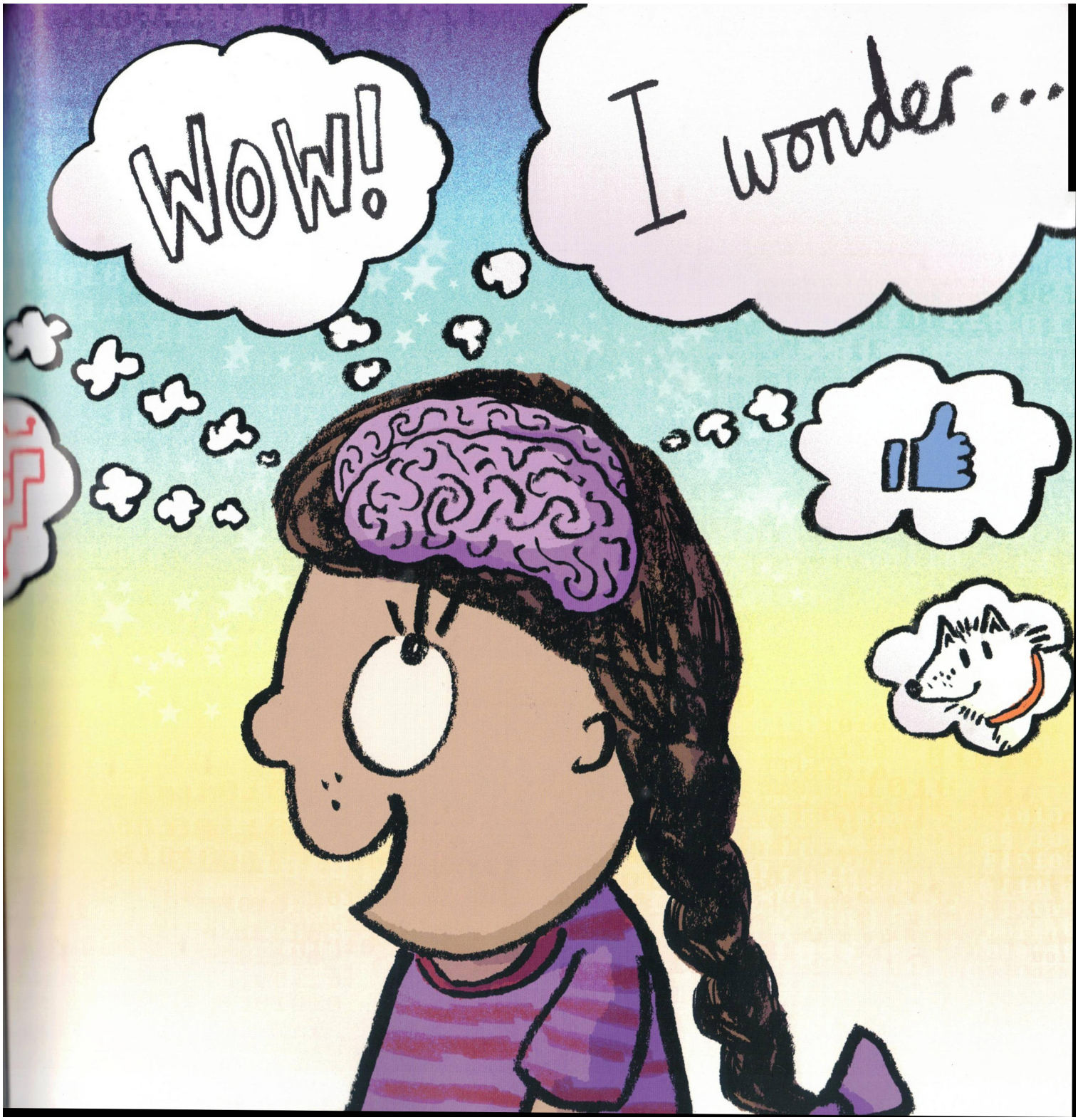
What about other things that people do?

I'm sure you can think of more. Which is great, because I think **LOTS OF THINKING** needs to go into the idea of making computers think – before actually **MAKING** computers that can think.



All this is probably making your brain **whirrrrrr.**
But don't worry, the thing whirring in your head, trying to make sense of all this right now, is still the most complex thing in the known universe . . .

For the time being, anyhow.


WOW!
I wonder...

For Mum, Dad and my ZX81 ~ N.L.

HODDER CHILDREN'S BOOKS
First published in Great Britain in 2024 by
Hodder and Stoughton

Copyright © Neal Layton, 2024
With thanks to AI consultant Jonny Brooks-Bartlett

Neal Layton has asserted his right under the Copyright, Designs and Patents Act 1988, to be identified as the author and illustrator of this work.
All rights reserved. A CIP catalogue record for this book is available from the British Library.

PB ISBN 978-1-444-97558-1
E-book ISBN 978-1-444-97559-8

3 5 7 9 10 8 6 4 2

Printed in China

MIX
Paper | Supporting responsible forestry
FSC® C104740
FSC www.fsc.org

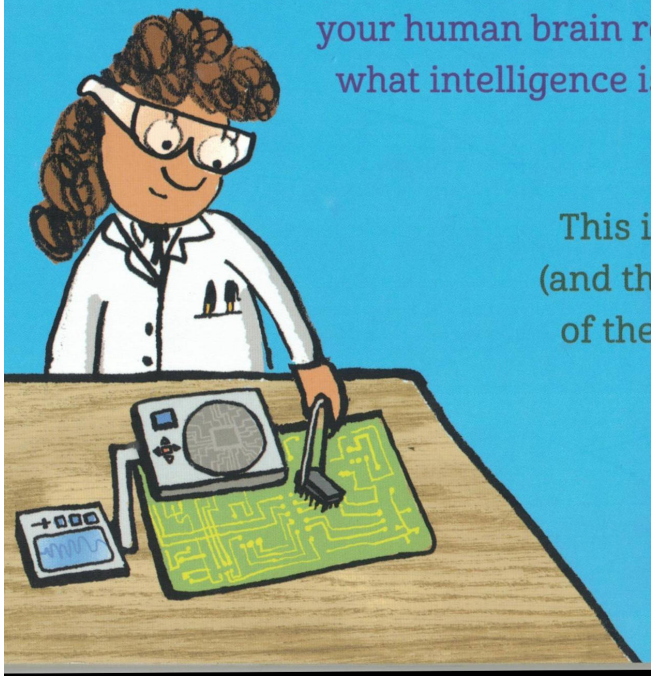
Hodder Children's Books
An imprint of Hachette Children's Group
Part of Hodder and Stoughton Limited
Carmelite House, 50 Victoria Embankment, London, EC4Y 0DZ

An Hachette UK Company
www.hachette.co.uk
www.hachettechildrens.co.uk
The authorised representative in the EEA is Hachette Ireland,
8 Castlecourt Centre, Dublin 15, D15 XTP3, Ireland (email: info@hbgi.ie)

Your brain is the most complex thing in the known universe – it can do lots of different types of thinking and learning. It is AMAZING.

But what if a computer could think and learn, just like you?

Find out all there is to know about AI, from how it works to why it's a big deal, and what AI could mean for us in the future. Along the way, you'll learn just how incredible your human brain really is, and what intelligence is all about.



This is the perfect book for curious kids (and their parents) wanting to make sense of the topic EVERYONE is talking about!

hachette INDIA
₹ 499

ISBN 978-1-44497-558-1
FSC
9 781444 975581
Hodder Children's Books
hachettechildrens.co.uk £8.99